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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/648,768	08/28/2000	Toshiyuki Sudo	2369.12202	5712

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EXAMINER

CHANG, AUDREY Y

ART UNIT

PAPER NUMBER

2872

DATE MAILED: 07/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	09/648,768	Applicant(s)	SUDO ET AL.
Examiner	Audrey Y. Chang	Art Unit	2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 06 May 2002.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-23 and 25 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-23 and 25 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. _____.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.

- 4) Interview Summary (PTO-413) Paper No(s) _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

Remark

- This Office Action is in response to applicant's amendment filed on May 9, 2002, which has been entered as paper number 7.
- By this amendment, the applicant has amended claims 11, 18-20 and 23 and has canceled claims 24, 49 and 50.
- Claims 1-23 and 25 remain pending in the application.
- The rejections to claims 11-18, 19-23 and 25 under 35 USC 112, second paragraph, set forth in the previous Office Action dated January 11, 2002 are *withdrawn* in response to applicant's amendment.
- The objection of claims 24, 49 and 50 under double patenting is withdrawn in response to applicant's amendment.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over the patent issued to Ono.

Claims 19 and 20 have been amended and new grounds of rejections are stated as follows.

Ono teaches a *parallax image input apparatus* that is comprised of an *imaging device* (16), serves as the *image capture means* for capturing an object (1, 2 or 3), an *imaging forming lens* (14) serves as the *imaging optical system* for guiding the light from the object to the imaging device, and a *lens pupil aperture position control means* (15) for spatially and temporally dividing the pupil of the lens into a plurality of areas and controlling the passing of light beam to each area. The apparatus also comprises a *general control unit* (18) for controlling the switching of the pupil aperture position control means and the *imaging recording device* for effectively recording and inputting the parallax image, (please see Figure 10 columns 11-12). The pupil is divided in horizontal direction.

Claims 19 and 20 have been amended to include the feature such that the size of the aperture for the exit pupil of the optical system to be less than half of the human pupil size. The Ono reference does not teach explicitly about the size of the apertures of the exit pupil as compared to the size of the human pupil. However the specification fails to teach the criticality of having this arrangement would overcome an problem in the prior art such modification is considered to be obvious matter of design choice for one skilled in the art to obtain different image quality as desired.

3. Claims 1, 2, 3-10 and 11-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the patent issued to Sudo.

The reasons for rejection are set forth in the previous Office Action dated January 11, 2002.

4. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over the patent issued to Ono as applied to claims 19 and 20 above, and further in view of the patent issued to Sudo.

The reasons for rejection are set forth in the previous Office Action dated January 11, 2002.

5. ~~Claims 23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over the patent issued to Sudo as applied to claims 1, 2 and 11 above, and further in view of the patent issued to Ono.~~

The reasons for rejection are set forth in the previous Office Action dated January 11, 2002.

Response to Arguments

6. Applicant's arguments filed on May 9, 2002 have been fully considered but they are not persuasive. The amendments to the claims have been fully considered and they are rejected for the reasons stated above.

7. In response to applicants' arguments which states that the cited claims 1, 2 and 11 disclose the feature "of providing multiple parallax images to a single eye is not provided for improving image quality but instead is provided for the purpose of realizing a stereoscopic display of super-multiviewed regions" which therefore differs from the cited Sudo reference the examiner respectfully disagrees for the reasons stated below. **Firstly**, the feature concerning "stereoscopic display of super-multiview regions" is not recited in the claims 1, 2 and 11. **Secondly**, the feature concerning "providing multiple parallax images to a single eye" is not recited in claims 2 and 11. The applicant is respectfully noted that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). **Thirdly**, the specification and the claims fail to explain how could stereoscopic image display be realized if the parallax images, i.e. the art-recognized image pairs including left-eye image and right-eye image designed to be viewed by left eye and right eye of an observer respectfully, be viewed by a single eye only of the observer. This feature completely defeats the fundamental principle of stereoscopic image viewing or display. **Fourthly**, if the division of the exit pupil of the optical system is purely for allowing multiple views, which has nothing to do with the provision stereoscopic image display, then making the images

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located at different exit pupil regions (27, of Sudo) be viewed by a single eye of the observer will be easily achieved one skilled in the art by simply reducing the sizes of the exit pupil regions to make them within the human pupil size as shown in Figure 17 of Sudo. Applicant's arguments therefore are not persuasive to overcome the rejections.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Audrey Y. Chang whose telephone number is 703-305-6208. The examiner can normally be reached on Monday-Friday (8:00-4:30), alternative Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cassandra Spyrou can be reached on 703-308-1637. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Audrey Y. Chang
Primary Examiner
Art Unit 2872

A. Chang, Ph.D.
July 19, 2002

